PATENT
Customer No. 22,852
Attorney Docket No. 05725.0895-02000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Sue FENG et al.	Group Art Unit: 1615
Application No.: 10/699,780	Examiner: Jyothsna A. VENKAT
Filed: November 4, 2003	
For: METHODS OF DISPENSING AT LEAST ONE COLORING AGENT USING AT LEAST ONE HETEROPOLYMER	Confirmation No.: 5902

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

DECLARATION UNDER 37 C.F.R. § 1.132

I, Stacy STERPHONE, do hereby make the following declaration:

1. I have a Bachelor's degree in Biology from Seton Hill College and a Master's degree in Cosmetic Science from Fairleigh Dickinson University.

2. I have more than fourteen (14) years experience in cosmetic formulations, including more than six (6) years experience with mascara formulations.

3. I am currently employed as the Manager of the Powder Lab of L'Oréal U.S.A. in Clark, New Jersey.

4. I have reviewed the specification of U.S. Patent Application No. 10/699,780, filed November 4, 2003. I believe that I am a person skilled in the art with respect to the subject matter disclosed in this application.

5. I have reviewed claims 1-3, 6, 28, 40, 47, 72, 75, 80, 96-98, 101, 123, 135, 142, 167, 170, 175, and 191-206 as set forth in the Reply to Office Action that I understand will be filed concurrently with this Declaration. In addition, I have reviewed the Office Action dated September 22, 2004 ("Office Action").

5a. It has been explained to me that the Patent Office has rejected certain claims of this application for non-compliance with the written description requirement of 35 U.S.C. § 112, first paragraph. Specifically, the Office Action states that "[t]here is no description in the specification for [the] heterocyclic ring systems" of R^4 and that "[t]he same is true for the definition of R3 when it is defined as 'when R3 are identical or different and chosen from organic groups comprising atoms chosen from carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms." Office Action at pages 2-3. I do not agree.

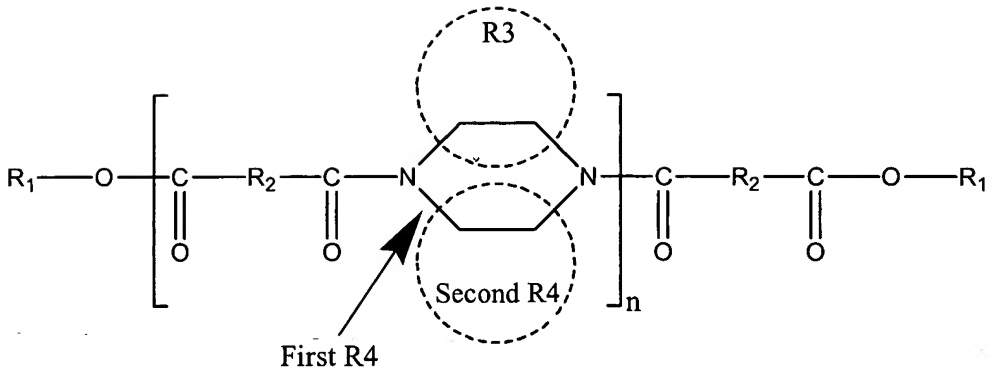
5b. It has also been explained to me that the Patent Office has also rejected certain of the current claims for non-compliance with the definiteness requirement of 35 U.S.C. § 112, second paragraph. Specifically, the Office Action states that the expressions defining the R^3 and R^4 groups are "without metes and bounds." Office Action at page 4. Once again, I do not agree.

6. I have reviewed paragraphs [0046] to [0058] of the original application discussing an embodiment of the inventive composition in which the at least one heteropolymer is at least one polyamide polymer of formula (I), wherein the variables R^3 and R^4 are clearly defined. I also note that paragraph [0046] calls specific attention to U.S. Patent No. 5,783,657 ("the '657 patent") for when the at least one heteropolymer is at least one polyamide polymer of formula (I). I am familiar with the '657 patent and

found that it discusses R^3 and R^4 groups possible within formula (I) in at least column 6, line 9 to column 7, line 14. The '657 patent references the R^4 groups of this application as R^{3a} groups.

7. Paragraph [0053] of the application defines R^4 as follows: "R^4, which are identical or different, are each chosen from hydrogen atoms, C_1 to C_{10} alkyl groups and direct bonds to at least one group chosen from R^3 and another R^4 such that when the at least one group is chosen from another R^4, the nitrogen atom to which both R^3 and R^4 are bonded forms part of a heterocyclic structure defined in part by R^4-N-R^3, with the proviso that at least 50% of all R^4 are chosen from hydrogen atoms." By this definition, I understand that a particular R^4 may be either a hydrogen atom, a C_1 to C_{10} alkyl group, or a direct bond that forms part of a heterocyclic structure.

7a. I know a heterocycle to be a chemical ring structure in which one or more of the atoms in the ring are not carbon atoms, i.e., heteroatoms. *See* Introduction to Organic Chemistry, third edition, page 998 (attached as Appendix A). From the definition of R^4 in paragraph [0053] of the application, I see that when R^4 is a direct bond to another R^4, the nitrogen atom to which both R^3 and R^4 are bonded can form part of a heterocyclic structure. For instance, when R^3 is an organic group comprising two carbon atoms (as described in paragraph [0052] of the application), the first R^4 in formula I is a direct bond to the second R^4, and the second R^4 is a C_2 alkyl group (as described in paragraph [0011] of the application), the following exemplary heterocyclic structure within formula (I) would be formed:



This example clearly shows a heterocyclic structure defined in part by first R^4-N-R^3, which I note is called a piperazine ring in the '657 patent at column 7, lines 3-10. Thus, based on my experience and knowledge, when reading the description of R^4 in the application I readily understand a heterocyclic structure to be possible for R^4-N-R^3, such as in the example described above.

7b. Moreover, paragraph [0053] of the application limits the various possible R^4 groups to one of three choices: a hydrogen atom, a C_1 to C_{10} alkyl group, or a direct bond that forms part of a heterocyclic structure. As a result, this definition also limits the number of possible heterocyclic structures. Since one R^4 that is a direct bond cannot form such a direct bond to a second R^4 that is a hydrogen atom (as a hydrogen atom can only form one bond), an R^4 can only be a direct bond to another R^4 when that other R^4 is a C_1 to C_{10} alkyl group, as defined by paragraph [0011] of the specification.

7c. Further, in conjunction with the present application, and particularly paragraph [0053], in view of the reference to the '657 patent in paragraph [0046] of the application I would also consider the description presented in the '657 patent, and in particular column 7, lines 3 to 13, to understand further kinds of heterocyclic structures that may be possible with the R^4 groups of the claimed invention.

7d. Based on my experience and knowledge, when reading the application I readily understand the characteristics of the R^4 groups discussed in paragraphs 7b and 7c, above, as shown by the example of paragraph 7a. Moreover, I understand the types and compositions of heterocyclic structures possible for the claimed invention from the descriptions of R^4 groups presented in the application. Also, as discussed in paragraphs 7a to 7c, above, I understand the claimed recitation of the R^4 group to limit the number of possible heterocyclic structures to those types and compositions; thus, I do not believe the definition in the claims to be "without metes and bounds."

8. Paragraph [0052] of the application defines R^3 as follows: "R^3, which are identical or different, are each chosen from organic groups comprising atoms chosen from carbon atoms, hydrogen atoms, oxygen atoms and nitrogen atoms with the proviso that R^3 comprises at least 2 carbon atoms." Paragraph [0058] further states that "R^3, which can be identical or different, can, for example, each be chosen from C_2 to C_{36} hydrocarbon-based groups and polyoxyalkylene groups," or, for example, "C_2 to C_{12} hydrocarbon-based groups."

8a. I understand from the description of R^3 in the application that R^3 is an organic group with a combination of carbon atoms, hydrogen atoms, nitrogen atoms, and/or oxygen atoms, wherein the organic group comprises at least 2 carbon atoms. Further, I understand both polyoxyalkylene and hydrocarbon-based groups to fall within R^3, as I know polyoxyalkylene groups comprise alternating alkylene groups and oxygen atoms, and hydrocarbon-based groups comprise carbon atoms and hydrogen atoms. Paragraph [0058] also describes and provides examples of hydrocarbon-based groups.

8b. In addition, as above with respect to R^4, in order to understand further kinds of organic, hydrocarbon-based, and/or polyoxyalkylene groups that may be possible for the R^3 groups of the claimed invention, beyond those presented in paragraphs [0052] and [0058] of the application and discussed above, I would also read the descriptions presented in at least column 6, line 9 to column 7, line 14 of the '657 patent in view of the reference to that patent in paragraph [0046] of the application.

8c. Based on my experience and knowledge, when reading the application I readily understand the types and compositions of R^3 groups possible in the claimed invention from the descriptions of R^3 groups presented in the application. As such, I also understand the claimed recitation of the R^3 group to define adequately the types and compositions of possible structures; thus, I do not believe the definition in the claims to be "without metes and bounds."

9. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Dated: March 14 2005

By: Stacy Sterphone
Stacy Sterphone

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Sue FENG et al.	Group Art Unit: 1615
Application No.: 10/699,780	Examiner: Jyothsna A. VENKAT
Filed: November 4, 2003	
For: METHODS OF DISPENSING AT LEAST ONE COLORING AGENT USING AT LEAST ONE HETEROPOLYMER	Confirmation No.: 5902

EXHIBIT A

Introduction to Organic Chemistry, third edition, pages 998-1000

THIRD EDITION

Introduction to Organic Chemistry

Andrew Streitwieser, Jr.
Clayton H. Heathcock
UNIVERSITY OF CALIFORNIA, BERKELEY

Macmillan Publishing Company *New York*
Collier Macmillan Publishers *London*

1985

Macmillan Publishing Company
866 Third Avenue, New York, New York 10022

Collier Macmillan Canada, Inc.

Library of Congress Cataloging in Publication Data

Streitwieser, Andrew,
Introduction to organic chemistry.

Includes index.
1. Chemistry, Organic. I. Heathcock, Clayton H.
II. Title.
QD251.2.S76 1985 547 84-15399
ISBN 0-02-418140-4 (Hardcover Edition)
ISBN 0-02-946720-9 (International Edition)

Printing: 4 5 6 7 8 Year: 7 8 9 0 1 2 3

ISBN 0-02-418140-4

Pref

Organic
being co
tory leve
with teac
way. So
previous
of organ
The bi
common
reactions
chemists
has occu
The use
to indica
atoms gc
use colo
The
brought
displace
in the cl
metal or
Nuclear
start on
nitriles h
placeme
of carbo
treating
12. The
manage
Anoth
This ap
istry tha
long inv
many re
of the t
convent
continu
approac
chapter
ment.
Othe
23) (o
chemist

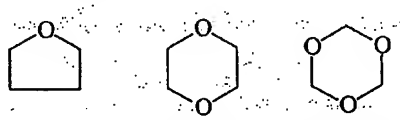
Chapter 31

Heterocyclic Compounds

31.1 Introduction

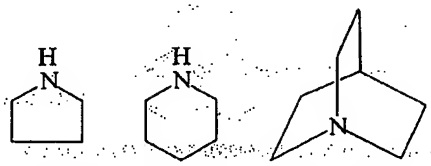
Heterocycles are cyclic compounds in which one or more ring atoms are not carbon (that is, heteroatoms). Although heterocyclic compounds are known that incorporate many different elements into cyclic structures (for example, N, O, S, B, Al, Si, P, Sn, As, Cu), we shall consider only some of the more common systems in which the heteroatom is N, O, or S.

Heterocycles are conveniently grouped into two classes, nonaromatic and aromatic. The nonaromatic compounds have physical and chemical properties that are typical of the particular heteroatom. Thus, tetrahydrofuran and 1,4-dioxane are typical ethers, while 1,3,5-trioxane behaves as an acetal.



tetrahydrofuran 1,4-dioxane 1,3,5-trioxane

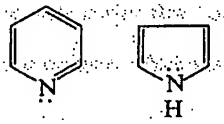
Pyrrolidine and piperidine are typical secondary amines and the bicyclic compound quinuclidine is a tertiary amine.



pyrrolidine piperidine quinuclidine

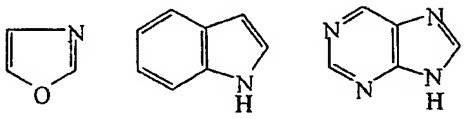
Since the chemistry of these compounds parallels the chemistry of their acyclic relatives, we shall treat them here only briefly.

The aromatic heterocycles include such compounds as pyridine, where nitrogen replaces one of the CH groups in benzene, and pyrrole, in which the aromatic sextet is supplied by the four electrons of the two double bonds and the lone pair on nitrogen.



pyridine pyrrole

Other aromatic heterocycles contain more than one heteroatom, and still others contain fused aromatic rings. Examples that we will treat in more detail later include oxazole, indole, and purine.

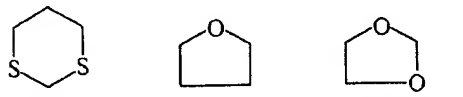


oxazole indole purine

The nomenclature of these heterocyclic series is a vast sea of special names for individual ring systems and trivial names for individual compounds. In the course of developing the chemistry of some important groups of compounds we will treat the associated nomenclature. There is only one naming scheme common to all of these compounds, and it, unfortunately, is used only in cases where alternative nomenclature based on special names is awkward. This scheme is based on the corresponding hydrocarbon. The compound formed by replacing a carbon by a heteroatom is named by an appropriate prefix: **aza** for nitrogen, **oxa** for oxygen, and **thia** for sulfur. For example, the following heterocycles are considered as derivatives of bicyclo[2.2.1]heptane and bicyclo[2.2.0]hexane, respectively.

1-azabicyclo[2.2.1]heptane 2-oxabicyclo[2.2.0]hexane

For saturated, monocyclic heterocycles not containing nitrogen the ring size is designated by a suffix. For three-membered heterocycles the suffix is **-irane**; for four-membered compounds it is **-etane**; for five-membered materials **-olane**; and for six-membered heterocycles the suffix is **-ane**. It should be remembered that this system is not used with nitrogen-containing rings. In addition, most of the simple heterocycles have common names that are in such general use that the systematic names are rarely used. Some examples of this nomenclature are as follows.



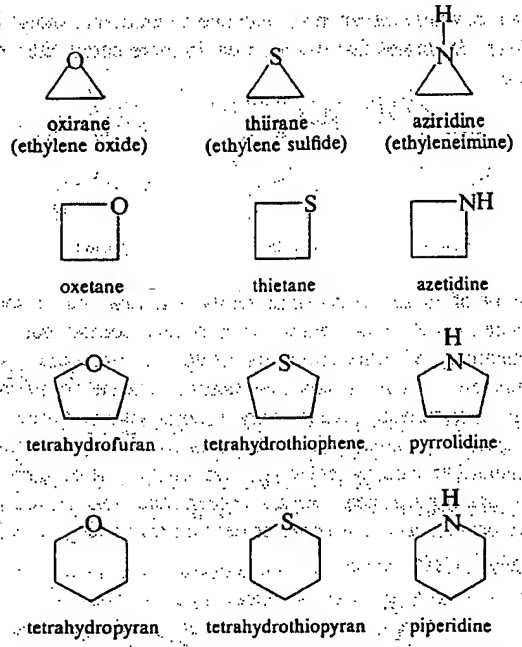
1,3-dithiane (used commonly) oxolane (rarely used) 1,3-dioxolane (used commonly)

The commonly used names for monocyclic rings with a single heteroatom will be discussed in the next section.

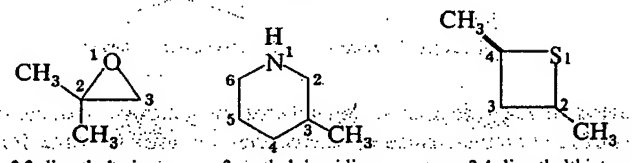
31.2 Nonaromatic Heterocycles

A. Nomenclature

Names in common use of some fully saturated heterocycles containing only one heteroatom are shown below.

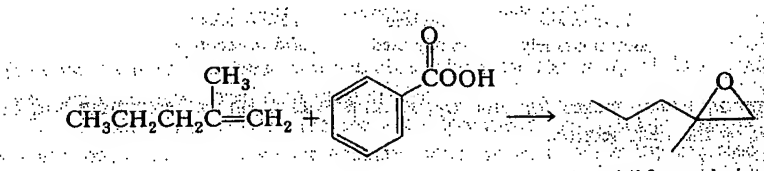


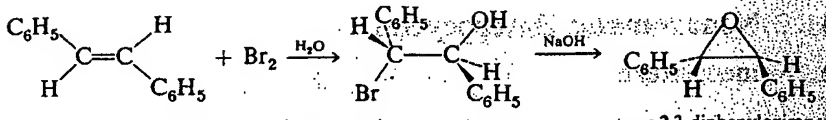
In naming substituted derivatives, the ring is numbered beginning with the heteroatom.



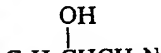
B. Three-Membered Rings

Oxiranes have been discussed previously (Sections 10.11.A and 11.6.E.). Recall that the two most general syntheses are the oxidation of alkenes with peroxyacids and the base-catalyzed cyclization of halohydrins (page 258).

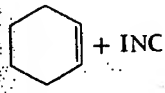




Aziridines are
method consist
which is cycliz

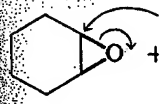


They may also
An example is t
iodo carbamate



EXERCISE 3
cyclohexeneim
the product th

Thiiranes are
cially useful m
ing reaction is



EXERCISE
with sodium t

The most st
extraordinary r

PATENT
Customer No. 22,852
Attorney Docket No. 05725.0895-02000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Sue FENG et al.	Group Art Unit: 1615
Application No.: 10/699,780	Examiner: Jyothsna A. VENKAT
Filed: November 4, 2003	
For: METHODS OF DISPERSING AT LEAST ONE COLORING AGENT USING AT LEAST ONE HETEROPOLYMER	Confirmation No. 5902

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

DECLARATION UNDER 37 C.F.R. § 1.131

I, Mohamed KANJI, do hereby make the following declaration:

1. I am an inventor of the above-identified application.

2. I was employed as the Manager of the Mascara Lab of L'Oréal in Clark, New Jersey, during the time the experiments described below were performed.

3. All experiments described below were performed at my direction and under my control.

4. Although the dates of these experiments have been redacted, as has other proprietary information, the experiments described below and embodied in the laboratory notebook pages of Exhibits A-C were performed before June 21, 2001.

5. Exhibits A-C show mascara compositions made comprising (i) at least one heteropolymer comprising a polymer skeleton which comprises at least one hydrocarbon-based repeating unit comprising at least one hetero atom; and (ii) at least one coloring

agent. Uniclear® 100 (*see* Exhibit A) as sold by Arizona Chemical Company is one example of this at least one heteropolymer. "Ethylenediamine/Tall oil dimer acid/Stearyl alcohol copolymer" (*see* Exhibits B-C) is the chemical name of one exemplary embodiment of the composition sold as Uniclear®, which the example on page 38 of the as-filed specification lists and uses in an inventive formation. *See* Exhibit D (pages from the CTFA International Cosmetic Ingredient Dictionary and Handbook, 10th Ed. (2004)). Uniclear® is also an example of a polymer that is at least one heteropolymer chosen from polyamide polymers of formula (I), as disclosed in the original specification at paragraph [0061].

6. Exhibits A-C show mascara compositions made comprising black iron oxide, which is at least one coloring agent. Black iron oxide is an example of an inorganic pigment. Inorganic pigments are discussed in the original specification at paragraph [0073]. Moreover, the example on page 38 of the as-filed specification lists and uses "black pigment" in an inventive formulation.

7. Exhibit B shows mascara compositions made further comprising at least one liquid fatty phase. One example of a liquid fatty phase is isododecane, which is an apolar oil and is recited in the original specification in paragraph [0087].

8. Exhibit C shows mascara compositions made further comprising at least one polysaccharide resin. An example of a polysaccharide resin includes hydrogenated or hydrolyzed corn starch. A specific example of a hydrogenated or hydrolyzed corn starch is KAMA KM-13, which is discussed in the original specification in paragraph [00102].

9. Exhibit A shows mascara compositions made further comprising at least one film former. One example of a film former is PVP K-30, which is discussed in the original specification in paragraph [00107].

10. At the conclusion of the experiments described above and in Exhibits A-C, I was aware that the compositions made were fundamentally useful as mascaras and exhibited at least one of the following characteristics because I had made a visual examination thereof: (1) good color dispersion; (2) gloss; and (3) intense color. Further, I was aware that the compositions had been tested on eyelashes, as it was the standard practice in the Mascara Lab to do so.

11. I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that the statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Dated: March 21, 2005

By: _____
Mohamed KANJI

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Sue FENG et al.	)	Group Art Unit: 1615
	)	
Application No.: 10/699,780	)	Examiner: Jyothsna A. VENKAT
	)	
Filed: November 4, 2003	)	
	)	
For: METHODS OF DISPERSING AT LEAST ONE COLORING AGENT USING AT LEAST ONE HETEROPOLYMER	)	Confirmation No. 5902

EXHIBIT A

First Redacted Laboratory Notebook Page of Sue Feng

REDACTED

REDACTED

REDACTED

Seq	Code	INCI Name	% (KG)		
A		Beeswax	4.80	4.80	4.80
		Glyceryl stearate	4.00	4.00	4.00
		Paraffin	2.50	2.50	2.50
		Carnauba wax	3.45	3.45	3.45
		Steric acid	3.00	3.00	3.00
		Butyl-paraben	0.50	0.50	0.50
		PVP/Eicosene copolymer	3.00	—	3.00
		Unichear 100 VG	3.00	3.00	3.00
		~~Soybean sesamide~~ Ceramide EP	0.25	0.25	0.25
A2		Polymethylmethacrylate	2.00	2.00	2.00
		Boric Iron Oxide	8.00	8.00	8.00
B		D.I. water	~~42.18~~ 41.68	~~45.18~~ 44.68	REDACTED
		Normcort ZZ-48	0.20	0.20	0.10
		PVP K-30	1.00	1.00	1.00
		Propylene Glycol	2.00	2.00	2.00
		Methyl paraben	0.40	0.40	0.40
		Triethanolamine	1.50	1.50	1.50
		Simethicone	0.10	0.10	0.10
C		Dimethicone copolyol	0.30	0.30	0.30
		Dimethicone/Cyclopentasiloxane	5.00	5.00	
D		D.I. water	1.00	1.00	1.00
		Polyquate-10	0.10	0.10	0.10
		Bisabolol	0.20	0.20	0.20
E		water	1.00	1.00	1.00
		Panthenol	0.50	0.50	0.50
F		Acrylates Copolymer	10.00	10.00	10.00
		Total:	100.00		100.00
G		Phenoxyethanol	c.s.c.	c.s.c.	0.50

REDACTED

Work continued to Page

SIGNATURE

DISCLOSED TO AND UNDERSTOOD BY

DATE

REDACTED

REDACTED

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Sue FENG et al.	Group Art Unit: 1615
Application No.: 10/699,780	Examiner: Jyothsna A. VENKAT
Filed: November 4, 2003	
For: METHODS OF DISPERSING AT LEAST ONE COLORING AGENT USING AT LEAST ONE HETEROPOLYMER	Confirmation No. 5902

EXHIBIT B

Second Redacted Laboratory Notebook Page of Sue Feng

REDACTED

REDACTED

Seq	Code	INCI Name	%	%	%	%	%	%
A		Isododecane	38.22	38.22	38.22	43.22	36.22	38.22
		Sorbitan Sesquioleate	0.25	0.25	0.25	0.25	0.25	0.25
A2		Black Iron Oxide	6.00	6.00	6.00	6.00	6.00	6.00
B		DISTEARDIMONIUM HECTORITE (Quaternium 18 Hectorite)	5.80	5.80	5.80	5.80	5.80	5.80
C		Rice Starch	1.00	1.00	1.00	1.00	1.00	1.00
		Isododecane (&) styrene ethylene / butylene / styrene triblock polymer and styrene ethylene propylene radial block polymer (Versagel MD 870)	5.00	5.00	5.00		5.00	5.00
C2		Rayon Flock Fiber	2.00		2.00	2.00	2.00	
		NYLON-66 (POLYAMIDE 0.9 DTEX 0.3 MM)		2.00				2.00
		Paraffine	2.60	2.60	2.60	2.60	2.60	2.60
		Carnauba wax	5.20	5.20	5.20	4.20	5.20	5.20
		Beeswax	5.40	5.40	5.40	4.40	5.40	5.40
		Rice wax	3.00	3.00	3.00	3.00	3.00	3.00
		Ethylenediamine/Tall Oil Dimer Acid/Stearyl Alcohol Copolymer				2.00	2.00	
		Synthetic Beeswax	3.80	3.80	3.80	3.80	3.80	3.80
		Alkyl sterate /VAC copolymer	2.40	2.40	2.40	2.40	2.40	2.40
		Polyvinyl Laurate	1.00	1.00	1.00	1.00	1.00	1.00
		PVP/Hexadecene copolymer (GANEX V216)	11.00			11.00	11.00	11.00
		LEXOREZ 200 (Trimethylpentanediol/Adipic acid/Glycerin Crosspolymer)		11.00	11.00			
E		Propylene Carborate	1.82	1.82	1.82	1.82	1.82	1.82
F		C8-9 Isoparaffin /Isopar E	5.50	5.50	5.50	5.50	5.50	5.50
G		Phenonip	0.01	0.01	0.01	0.01	0.01	0.01
		TOTAL	100.00	100.00	100.00	100.00	100.00	100.00
		Vis (#4)	17.50	24.70	Too thick	16.20	28.80	23.60
		S.G.	0.89	0.86		0.88	0.88	0.89

REDACTED

REDACTED

REDACTED

REDACTED

Work continued to Page

SIGNATURE

DISCLOSED TO AND UNDERSTOOD BY

NG

DATE

REDACTED

WITNESS

DATE

REDACTED

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Sue FENG et al.	Group Art Unit: 1615
Application No.: 10/699,780	Examiner: Jyothsna A. VENKAT
Filed: November 4, 2003	
For: METHODS OF DISPERSING AT LEAST ONE COLORING AGENT USING AT LEAST ONE HETEROPOLYMER	Confirmation No. 5902

EXHIBIT C

Third Redacted Laboratory Notebook Page of Sue Feng

REDACTED

Seq	INCI Name	%	%	%	%	%
A	Isododecane	36.22	35.22	34.72	34.22	35.22
	Sorbitan Sesquioleate	0.25	0.25	0.25	0.25	0.25
A2	Black Iron Oxide	6.00	6.00	6.00	6.00	6.00
B	DISTEARDIMONIUM HECTORITE (Quaternium 18 Hectorite)	5.80	5.80	5.80	5.80	5.80
C	Rice Starch	1.00	1.00	1.00	1.00	1.00
	Isododecane (&) styrene ethylene / butylene / styrene triblock polymer and styrene ethylene propylene radial block polymer (Versagel MD 870)	5.00	5.00	5.00	5.00	5.00
	Hydrogenated Corn Starch		1.00	1.00	1.00	1.00
C2	Rayon Flock Fiber	2.00	2.00	2.50	3.00	
	NYLON-66 (POLYAMIDE 0.9 DTEX 0.3 MM)					2.00
D	Paraffine	2.60	2.60	2.60	2.60	2.60
	Carnauba wax	5.20	5.20	5.20	5.20	5.20
	Beeswax	5.40	5.40	5.40	5.40	5.40
	Rice wax	3.00	3.00	3.00	3.00	3.00
	Ethylenediamine/Tall Oil Dimer Acid/Stearyl Alcohol Copolymer	2.00	2.00	2.00	2.00	2.00
	Synthetic Beeswax	3.80	3.80	3.80	3.80	3.80
	Alkyl sterate /VAC copolymer	2.40	2.40	2.40	2.40	2.40
	Polyvinyl Laurate	1.00	1.00	1.00	1.00	1.00
	Hydrogenated Polyisobutene	8.00	8.00	8.00	8.00	8.00
E	Propylene Carborate	1.82	1.82	1.82	1.82	1.82
F	C8-9 Isoparaffin /Isopar E	8.50	8.50	8.50	8.50	8.50
G	Phenonip	0.01	0.01	0.01	0.01	0.01
	TOTAL	100.00	100.00	100.00	100.00	100.00
	S.G.	0.89	0.89	0.88	0.89	0.88
	Vis(#4)	21.50	26.40	18.70	27.60	18.10

REDACTED

REDACTED

REDACTED

REDACTED

Work continued to Page

SIGNATURE

DISCLOSED TO AND UNDERSTOOD BY

NG

DATE

WITNESS

REDACTED

REDACTED

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Sue FENG et al.	Group Art Unit: 1615
Application No.: 10/699,780	Examiner: Jyothsna A. VENKAT
Filed: November 4, 2003	
For: METHODS OF DISPERSING AT LEAST ONE COLORING AGENT USING AT LEAST ONE HETEROPOLYMER	Confirmation No. 5902

EXHIBIT D

CTFA International Cosmetic Ingredient Dictionary and Handbook, 10th Ed. (2004),

Pages 657-658 and 3583

International Cosmetic Ingredient Dictionary and Handbook

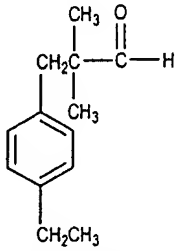
Tenth Edition
2004

Editors
Tara E. Gottschalck
Gerald N. McEwen, Jr., Ph.D., J.D.

Volume 1

Published by
The Cosmetic, Toiletry, and Fragrance Association
1101 17th Street, NW, Suite 300
Washington, D.C. 20036-4702
www.ctfa.org

Definition: Ethyl 2,2-Dimethylhydrocinnamal is the aromatic aldehyde that conforms generally to the formula:



Information Source: RIFM

Chemical Class: Aldehydes

Function: Fragrance Ingredient

Technical/Other Names:
alpha,alpha-Dimethyl-p-ethylphenylpropanal (RIFM)
α,α-Dimethyl-p-ethylphenylpropanal
3-(p-Ethylphenyl)-2,2-Dimethylpropion-aldehyde

Trade Name:
Floralozone (International Flavors & Fragrances)

ETHYLENE/ACRYLIC ACID COPOLYMER

CAS No.: 9010-77-9

Definition: Ethylene/Acrylic Acid Copolymer is a copolymer of ethylene and acrylic acid monomers.

Information Sources: 21CFR177.1310, 21CFR178.1005, CIR: [SQ] IJT 21(SUPPL. 3) 2002

Chemical Class: Synthetic Polymers

Functions: Binder; Film Former; Viscosity Increasing Agent - Nonaqueous

Technical/Other Name:
2-Propenoic Acid with Ethene

Trade Names:
A-C Copolymer 540 (Honeywell)
A-C Copolymer 580 (Honeywell)
A-C Copolymer 540A (Honeywell)
AEC Ethylene/Acrylic Acid Copolymer (A & E Connock)
EA-209 (Kobo)

ETHYLENE/ACRYLIC ACID/VA COPOLYMER

CAS No.: 26713-18-8

Definition: Ethylene/Acrylic Acid/VA Copolymer is a copolymer of ethylene, acrylic acid and vinyl acetate monomers.

Information Source: CIR: [SQ] IJT 21 (SUPPL. 3) 2002

Chemical Class: Synthetic Polymers

Functions: Binder; Film Former; Viscosity Increasing Agent - Nonaqueous

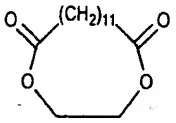
Technical/Other Name:
2-Propenoic Acid, Polymer with Ethene and Ethenyl Acetate

ETHYLENE BRASSYLATE

CAS No. 105-95-3 **EINECS No.** 203-347-8

Empirical Formula:
$C_{15}H_{26}O_4$

Definition: Ethylene Brassylate is the cyclic ester that conforms to the formula:



Information Sources: 21CFR172.515, RIFM, TSCA

Chemical Class: Esters

Function: Fragrance Ingredient

Reported Product Categories: Foundations; Moisturizing Preparations; Cleansing Products (Cold Creams, Cleansing Lotions, Liquids and Pads); Personal Cleanliness Products, Misc.

Technical/Other Names:
1,4-Dioxacycloheptadecane-5,17-dione
Ethylene brassylate (RIFM)
Ethylene Undecane Dicarboxylate

Trade Name:
AEC Ethylene Brassylate (A & E Connock)

ETHYLENE/CALCIUM ACRYLATE COPOLYMER

CAS No.: 26445-96-5

Empirical Formula:
$(C_3H_4O_2 \cdot C_2H_4)_x \cdot xCa$

Definition: Ethylene/Calcium Acrylate Copolymer is a copolymer of ethylene and calcium acrylate monomers.

Information Sources: 21CFR175.105, CIR: [SQ] IJT 21(SUPPL. 3) 2002

Chemical Class: Synthetic Polymers

Functions: Binder; Film Former

Technical/Other Name:
2-Propenoic Acid, Polymer with Ethene, Calcium Salt

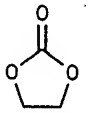
ETHYLENE CARBONATE

CAS No. 96-49-1 **EINECS No.** 202-510-0

JPN Translation:
炭酸エチレン

Empirical Formula:
$C_3H_4O_3$

Definition: Ethylene Carbonate is the organic compound that conforms to the formula:



Information Sources: JCIC, JCLS

Chemical Class: Esters

Function: Solvent

Technical/Other Name:
1,3-Dioxolan-2-one

ETHYLENEDIAMINE/DIMER TALLATE COPOLYMER BIS-HYDROGENATED TALLOW AMIDE

Definition: Ethylenediamine/Dimer Tallate Copolymer Bis-Hydrogenated Tallow Amide is a copolymer of ethylenediamine and tall oil dimer acid monomers, end-blocked with Hydrogenated Tallowamine (q.v.).

Chemical Class: Synthetic Polymers

Functions: Oral Care Agent; Skin-Conditioning Agent - Miscellaneous; Viscosity Increasing Agent - Nonaqueous

Technical/Other Name:
Sylvaclear A200

ETHYLENEDIAMINE/STEARYL DIMER DILINOLEATE COPOLYMER

Definition: Ethylenediamine/Stearyl Dimer Dilinoleate Copolymer is a copolymer of ethylenediamine and Dilinoleaic Acid (q.v.) monomers, end-blocked with stearyl alcohol.

Chemical Class: Synthetic Polymers

Functions: Oral Care Agent; Skin-Conditioning Agent - Miscellaneous; Viscosity Increasing Agent - Nonaqueous

Trade Name:
UNICLEAR (Arizona)

ETHYLENEDIAMINE/STEARYL DIMER TALLATE COPOLYMER

Definition: Ethylenediamine/Stearyl Dimer Tallate Copolymer is a copolymer of ethyl-

enediamine and tall oil dimer acid monomers, end-blocked with stearyl alcohol.

Chemical Class: Synthetic Polymers

Functions: Oral Care Agent; Skin-Conditioning Agent - Miscellaneous; Viscosity Increasing Agent - Nonaqueous

Trade Name:
UNICLEAR (Arizona)

ETHYLENE DICHLORIDE

CAS Nos.	EINECS Nos.
107-06-2	203-458-1
1300-21-6	215-077-8

Empirical Formula:
$C_2H_4Cl_2$

Definition: Ethylene Dichloride is the halogenated aliphatic hydrocarbon that conforms to the formula:

$ClCH_2CH_2Cl$

Information Sources: 21CFR165.110, 21CFR172.560, 21CFR172.710, 21CFR172.864, 21CFR173.165, 21CFR173.230, 21CFR173.315, 21CFR175.105, 21CFR573.440, EEC(II-125), FCC, MI-13(3831), TSCA

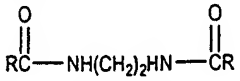
Chemical Class: Halogen Compounds

Function: Not Reported

Technical/Other Names:
Dichloroethane
Ethane, 1,2-Dichloro-

ETHYLENE DIHYDROGENATED TALLOWAMIDE

Definition: Ethylene Dihydrogenated Tallowamide is the diamide that conforms generally to the formula:



where RCO- represents the fatty acids derived from hydrogenated tallow.

Chemical Class: Amides

Function: Viscosity Increasing Agent - Nonaqueous

Technical/Other Names:
N,N'-1,2-Ethanediylbis(Hydrogenated Tallowamide)
(Hydrogenated Tallowamide), N,N'-1,2-Ethanediylbis-

ETHYLENE DILINOLEAMIDE

Definition: Ethylene Dilinoleamide is the condensation product of ethylenediamine with Dilinoleic Acid (q.v.).

Information Sources: JCIC, JCLS

Chemical Class: Amides

Function: Skin-Conditioning Agent - Miscellaneous

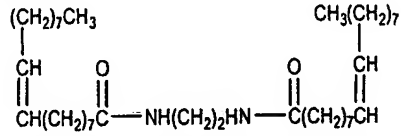
Technical/Other Name:
Condensate of Dilinoleic Acid and Ethylenediamine

ETHYLENE DIOLEAMIDE

CAS No.	EINECS No.
110-31-6	203-756-1

Empirical Formula:
$C_{38}H_{72}N_2O_2$

Definition: Ethylene Dioleamide is the diamide that conforms generally to the formula:



Information Sources: 21CFR175.300, TSCA

Chemical Class: Amides

Function: Viscosity Increasing Agent - Nonaqueous

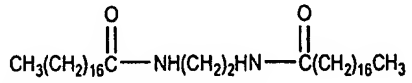
Technical/Other Names:
N,N'-1,2-Ethanediylbis-9-Octadecenamide
9-Octadecenamide, N,N'-1,2-Ethanediylbis-

ETHYLENE DISTEARAMIDE

CAS No.	EINECS No.
110-30-5	203-755-6

Empirical Formula:
$C_{38}H_{76}N_2O_2$

Definition: Ethylene Distearamide is the diamide that conforms to the formula:



Information Source: TSCA

Chemical Class: Amides

Function: Viscosity Increasing Agent - Nonaqueous

Technical/Other Names:
N,N'-1,2-Ethanediylbisoctadecanamide
N,N'-Ethylene Bisstearamide
Octadecanamide, N,N'-1,2-Ethanediylbis-

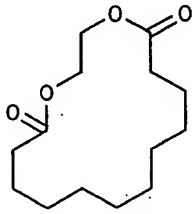
Trade Name:
Lipowax C (Lipo)

ETHYLENE DODECANEDIOATE

CAS No.	EINECS No.
54982-83-1	259-423-6

Empirical Formula:
$C_{14}H_{24}O_4$

Definition: Ethylene Dodecanedioate is the organic compound that conforms to the formula:



Information Source: RIFM

Chemical Classes: Esters; Heterocyclic Compounds

Function: Fragrance Ingredient

Technical/Other Names:
Cyclic Ethylene Dodecanedioate
1,4-Dioxacyclohexadecane-5,16-Dione
Ethylene dodecanedioate (RIFM)
Musk C-14

Trade Name:
Zenolide (International Flavors)

ETHYLENE/MA COPOLYMER

CAS No.: 9006-26-2

JPN Translation:
（エチレン / マレイン酸）コポリマー

Definition: Ethylene/MA Copolymer is a polymer of ethylene and maleic anhydride monomers.

Information Sources: 21CFR175.105, 21CFR177.1210, 21CFR177.1520, JCIC, JCLS, TSCA

Chemical Class: Synthetic Polymers

Functions: Binder; Film Former; Suspending Agent - Nonsurfactant

Technical/Other Names:
Ethylene/Maleic Anhydride Copolymer
2,5-Furandione, Polymer with Ethene

ETHYLENE/MAGNESIUM ACRYLATE COPOLYMER

CAS No.: 27515-37-3

Empirical Formula:
$(C_3H_4O_2 \cdot C_2H_4)_x \cdot xMg$

Definition: Ethylene/Magnesium Acrylate Copolymer is a copolymer of ethylene and magnesium acrylate monomers.

International Cosmetic Ingredient Dictionary and Handbook

Tenth Edition
2004

Editors
Tara E. Gottschalck
Gerald N. McEwen, Jr., Ph.D., J.D.

Volume 4

Published by
The Cosmetic, Toiletry, and Fragrance Association
1101 17th Street, NW, Suite 300
Washington, D.C. 20036-4702
www.ctfa.org

Technical/Trade Name	INCI Name
Unibetaine K (Universal Preserv-A-Chem)	Cocamidopropyl Betaine
Unibetaine LB (Universal Preserv-A-Chem)	Lauryl Betaine
Unibetaine OLB-50 (Universal Preserv-A-Chem)	Oleyl Betaine
Unibiovit B-33 (Induchem)	Decyl Oleate (and) Farnesol (and) Ethyl Linoleate (and) Farnesyl Acetate
Unibiovit B-332 watersoluble (Induchem)	PEG-12 Glyceryl Laurate (and) PEG-36 Castor Oil (and) Farnesol (and) Ethyl Linoleate (and) Farnesyl Acetate
Unibiovit B-332 WS (Lipo)	PEG-12 Glyceryl Laurate (and) PEG-36 Castor Oil (and) Farnesol (and) Ethyl Linoleate (and) Farnesyl Acetate
Unicast-CO (Universal Preserv-A-Chem)	Ricinus Communis (Castor) Seed Oil
Unicerin C-30 (Induchem)	Lactose (and) Cellulose (and) Sericin (and) Hydroxypropyl Methylcellulose (and) Iron Oxides
Unichem ALSUL (Universal Preserv-A-Chem)	Aluminum Sulfate
Unichem AMAL (Universal Preserv-A-Chem)	Ammonium Alum
Unichem BICARB-S (Universal Preserv-A-Chem)	Sodium Bicarbonate
Unichem CALCARB (Universal Preserv-A-Chem)	Calcium Carbonate
Unichem CALCHLOR (Universal Preserv-A-Chem)	Calcium Chloride
Unichem CS (Universal Preserv-A-Chem)	Calcium Stearate
Unichem DIPA (Universal Preserv-A-Chem)	Diisopropanolamine
Unichem KI (Universal Preserv-A-Chem)	Potassium Iodide
Unichem LACA (Universal Preserv-A-Chem)	Lactic Acid
Unichem MC (Universal Preserv-A-Chem)	Magnesium Carbonate
Unichem MENT (Universal Preserv-A-Chem)	Menthol
Unichem METSAL (Universal Preserv-A-Chem)	Methyl Salicylate
Unichem MS (Universal Preserv-A-Chem)	Magnesium Stearate
Unichem PBA (Universal Preserv-A-Chem)	Lead Acetate
Unichem POCARB (Universal Preserv-A-Chem)	Potassium Carbonate
Unichem POCHLOR (Universal Preserv-A-Chem)	Potassium Chloride
Unichem POHYD (Universal Preserv-A-Chem)	Potassium Hydroxide
Unichem RSC (Universal Preserv-A-Chem)	Resorcinol
Unichem SALAC (Universal Preserv-A-Chem)	Salicylic Acid
Unichem SOHYD (Universal Preserv-A-Chem)	Sodium Hydroxide
Unichem SS (Universal Preserv-A-Chem)	Sodium Stearate
Unichem THYMOL (Universal Preserv-A-Chem)	Thymol
Unichem TIPA (Universal Preserv-A-Chem)	Triisopropanolamine
Unichem ZO (Universal Preserv-A-Chem)	Zinc Oxide
Unichem ZPS (Universal Preserv-A-Chem)	Zinc Phenolsulfonate
Unichem ZS (Universal Preserv-A-Chem)	Zinc Stearate
Unichol (Universal Preserv-A-Chem)	Cholesterol
Unichondrin ATP (Induchem)	Butylene Glycol (and) Hydrolyzed Vegetable Protein (and) Adenosine Triphosphate (and) Sodium Chondroitin Sulfate
Unicid 425 Acid (Baker Petrolite)	C20-40 Acid (and) Polyethylene
Unicid 700 Acid (Baker Petrolite)	C40-60 Acid (and) Polyethylene
Unicide U-13 (Induchem)	Imidazolidinyl Urea
UNICLEAR (Arizona)	Ethylenediamine/Stearyl Dimer Dilinoleate Copolymer (or) Ethylenediamine/Stearyl Dimer Tallate Copolymer
Unicol 50 (Universal Preserv-A-Chem)	Benzalkonium Chloride
Unicol 123 (Universal Preserv-A-Chem)	Cetearyl Alcohol (and) Steareth-10
Unicol 1200 (Universal Preserv-A-Chem)	PPG-20
Unicol CA-2 (Universal Preserv-A-Chem)	Ceteth-2
Unicol CA-4 (Universal Preserv-A-Chem)	Ceteth-4
Unicol CA-10 (Universal Preserv-A-Chem)	Ceteth-10
Unicol CPS (Universal Preserv-A-Chem)	Cetearyl Alcohol (and) PEG-150 Stearate (and) Steareth-20
Unicol CSA-2 (Universal Preserv-A-Chem)	Ceteareth-2
Unicol CSA-5 (Universal Preserv-A-Chem)	Ceteareth-5
Unicol CSA-10 (Universal Preserv-A-Chem)	Ceteareth-10
Unicol CSA-15 (Universal Preserv-A-Chem)	Ceteareth-15
Unicol CSA-20 (Universal Preserv-A-Chem)	Ceteareth-20
Unicol CSA-40 (Universal Preserv-A-Chem)	Ceteareth-40
Unicol LA-4 (Universal Preserv-A-Chem)	Laureth-4
Unicol LA-9 (Universal Preserv-A-Chem)	Laureth-9
Unicol LA-12 (Universal Preserv-A-Chem)	Disodium Lauroampho-dipropionate
Unicol LA-23 (Universal Preserv-A-Chem)	Laureth-23
Unicol NP-2 (Universal Preserv-A-Chem)	Nonoxynol-2